

AMENDMENTS TO THE CLAIMS:

1. (Currently amended) A storage management system for managing a data file in storage to be accessed by a user, the storage management system comprising:

a management object for ~~managing a data file~~ controlling management access in response to a request from a manager connected to the storage management system through a network ~~upon an access by a user~~, said management object authenticating a second manager ID and a second password received through the network from the manager, in accordance with a first ID and a first password stored beforehand to authenticate the manager; [[and]]

a storage configuration information file containing settings of the storage management system; and

~~interfaces to be~~ a temporary software interface object for accessing the settings in the storage configuration information file through the network, said temporary software interface object to be created by said management object when both authentication of the second manager ID and authentication of the second password by said management object succeed, and to be expired after a predetermined permission time, wherein:

the authenticated manager's access to the settings contained in the storage configuration information file is permitted only while the temporary software interface object exists,

said management object transmits a key, needed for communication through the network with the temporary software interface object, to the authenticated manager to enable management access to the storage configuration information file, and

said ~~interfaces~~ temporary software interface object permitting an access to ~~said data file~~ during the settings in the storage configuration information file is erased after lapse of said predetermined permission time from so as to expire access by the authenticated manager.

2. (Currently amended) A storage management system according to claim 1, wherein said ~~interfaces~~ temporary software interface object created by said management object ~~are~~ is expired ~~by themselves~~ when a log-out sent from the authenticated manager at the end of the access is received.

3. (Currently amended) A storage management system according to claim 1, wherein said ~~management object transmits a corresponding cipher key~~ transmitted to the authenticated manager ~~authenticated by the second manager ID and the second password, and the authenticated manager accesses the interfaces by using the cipher key~~ represents an address of the temporary software interface object.

4. (Currently amended) A storage management system according to claim 3, wherein ~~said management object creates different interfaces when authentication of another manager ID and authentication of another password sent from another manager succeeds, to be expired after a predetermined permission time, the different interfaces permitting an access to said data file during said predetermined permission time by said another manager~~ wherein:

the temporary software interface object created for the authenticated manager enables use of a subset of management functions available through the storage management system when accessing the storage configuration information file; and

the subset of management functions is defined by a stored information file for the authenticated manager from among a plurality of individualized stored information files for a plurality of managers.

5. (Currently amended) A storage management system according to claim 1, wherein said management object determines not to create ~~the interfaces~~ a temporary software interface object is if a non-use period from most recent log-out of the manager exceeds a predetermined period when the second manager ID and the second password are authenticated.

6. (Currently amended) A storage management system according to claim 1, further comprising an information file for storing a plurality of functions of a remote method invocation protocol ~~each having permission time for a manager~~ and a plurality of flags for defining which manager is permitted to use which function.

7. (Original) A storage management system according to claim 6, wherein said information file stores a flag for temporarily stopping the use of the created interfaces in response to a maintenance request.

8. (Original) A storage management system according to claim 1, further comprising a storage for storing a Java virtual machine having a Java applet program, wherein the Java applet program is transmitted to the manager in response to a request from the manager.

9. (Currently amended) A management program having computer codes readable by a storage management system to run thereon, for controlling management access in response to a request from a manager connected through a network to the storage management system, wherein the storage management system manages a data file in storage to be accessed by a user, the program comprising:

a step of authenticating a second manager ID and a second password received through the network from ~~[[a]]~~ the manager accessing to a data file, in accordance with a first ID and a first password stored ~~beforehand~~ beforehand, to authenticate the manager; ~~[[and]]~~

a step of creating ~~interfaces~~ a temporary software interface object at the storage management system needed for accessing a storage configuration information file containing settings of the storage management system through the network, for the ~~manager~~ manager, if the authenticating of the second manager ID and the second password succeeds, wherein the authenticated manager's access to the settings contained in the storage configuration information file is permitted only while the temporary software interface object exists;

a step of transmitting a key needed for communication through the network with the temporary software interface object to the authenticated manager to enable management access to the storage configuration information file; and

a step of erasing said ~~interfaces~~ temporary software interface object permitting access by the manager during after a lapse of a predetermined permission time time, so as to expire the authenticated manager's ability to access the settings in the storage configuration information file.

10. (Currently amended) A management program according to claim 9, wherein the ~~interfaces are~~ temporary software interface object is expired by themselves when a log-out sent from the authenticated manager at the end of an access is received.

11. (Currently amended) A management program according to claim 9, ~~further comprising a step of transmitting a corresponding cipher~~ wherein the key transmitted to the

authenticated manager having been authenticated by the second manager ID and the second password represents an address of the temporary software interface object.

12. (Currently amended) A management program according to claim 11, ~~further comprising a step of creating different interfaces when the authentication of another manager ID and another password sent from another manager succeeds, and to be expired after a predetermined permission time, the different interfaces permitting an access to said data file during said predetermined permission time by the another manager wherein:~~

the temporary software interface object created for the authenticated manager enables use of a subset of management functions available through the storage management system when accessing the storage configuration information file; and

the subset of management functions is defined by a stored information file for the authenticated manager from among a plurality of individualized stored information files for a plurality of managers.

13. (Currently amended) A management program according to claim 9, further comprising a step of preventing the creation of ~~interfaces~~ a temporary software interface object if a non-use period from most recent log-out of the manager exceeds a predetermined period when the second manager ID and the second password are authenticated.

14. (Original) A management program according to claim 9, wherein there is provided an information file for storing a plurality of functions of a remote method invocation protocol and a plurality of flags for defining which manager is permitted to use which function.

15. (Original) A management program according to claim 14, further comprising a step of storing a flag for temporarily stopping the use of the created interfaces in response to a maintenance request.

16. (Original) A management program according to claim 9, further comprising a step of transmitting a Java applet program from a Java virtual machine to the manager in response to a request from the manager.

17. (Currently amended) A ~~storage management~~ method of ~~managing~~ controlling management access in response to a request from a manager connected through a network to a storage management system managing a data file in storage to be accessed by a user, the method comprising:

authenticating a second manager ID and a second password received through the network from the manager, in accordance with a first ID and a first password stored beforehand, to authenticate the manager;

creating ~~interfaces~~ for the authenticated manager a temporary software interface object at the storage management system needed for accessing a storage configuration information file containing settings of the storage management system through the network, when both authentication of the second manager ID and authentication of the second password ~~succeed to permit an access by the authenticated manager~~ succeed, wherein the authenticated manager's access to the settings contained in the storage configuration information file is permitted only while the temporary software interface object exists;

transmitting a key needed for communication through the network with the temporary software interface object to the authenticated manager to enable management access to the storage configuration information file; and

~~expiring~~ erasing the interfaces temporary software interface object after a lapse of a predetermined permission ~~time~~ time, so as to ~~expire the authenticated manager's ability to access the settings in the storage configuration information file.~~

18. (Currently amended) A ~~storage management~~ method according to claim 17, further comprising ~~expiring the created interfaces by themselves~~ temporary software interface object when a log-out sent from the authenticated manager at the end of the access is received.

19. (Currently amended) A ~~storage management~~ method according to claim 17, ~~further comprising transmitting a corresponding cipher wherein the key transmitted to the authenticated manager having been authenticated by the second manager ID and the second password~~ represents an address of the temporary software interface object.

20. (Cancelled)

21. (New) A method according to claim 17, wherein:

the temporary software interface object created for the authenticated manager enables use of a subset of management functions available through the storage management system when accessing the storage configuration information file; and

the subset of management functions is defined by a stored information file for the authenticated manager from among a plurality of individualized stored information files for a plurality of managers.